EXIT

The OMEX II Data Set CD-ROM

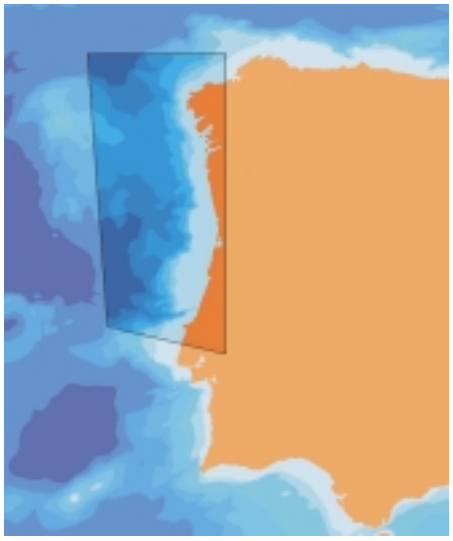
The second phase of the Ocean Margin Exchange experiment (OMEX II) ran from June 1997 until May 2000, with fieldwork between June 1997 and October 1999. The project studied processes at the Iberian continental margin, with the main focus from the coast to the base of the slope between 42 and 43 degrees north.

The OMEX II fieldwork collected over 440 individual data sets during 33 research cruise legs involving the vessels from 7 European nations.

The British Oceanographic Data Centre provided OMEX II data management services, collecting over 96% of the data sets identified into an integrated database that forms the core of the electronic publication.

The contents of the CD-ROM may be considered as a series of objects. Each object has a data or information content together with a mechanism for delivering these to the user.

OMEX II Field Area



OMEX II Database Contents

>1000	CTD Profiles
>400	FLY Turbulence Profiles
>100	Radiometer Profiles
>80	XBT Profiles
>10000	ADCP Profiles
>6500	Water Samples (>900 Parameters Measured)
>400	Core Profiles (>250 Parameters Measured)
>150	Net Hauls (>330 Parameters Measured)
>180	Sediment Trap Samples (>100 Parameters Measured)
>190	Production Experiments
>100	Benthic Fauna Samples
>20	Drifting Buoy Tracks

The OMEX II Database

This is by far the most important object on the CD-ROM. It is a relational database that includes all of the data collected during the project with the exception of surface underway data, moored instrument data and data from a small number of UOR tows.

The database includes over 100 Mbytes of data and is presented on the CD-ROM in three variants of Microsoft JET format together with an ASCII 'kit form' database designed to be compatible with any database management system.

A *Windows* application program, the Database Explorer, has been developed that allows most types of data to be retrieved through a powerful and flexible search engine. The remaining data types are accessible through a Microsoft *Access* (version 7.0 or later) forms interface. The ASCII 'kit-form' database comprises one file per database table. All fields,

including internal keys, are supplied to allow the database to be recreated with ease under any database system. Alternatively, conventional data processing applications may be written against these files.

The database is supported by extensive documentation in a soft manual in Adobe *Acrobat* PDF format. This includes full descriptions of the data collection protocols, a description of the database structure and contents and instructions on the use of the BODC interface software

OMEX II Underway Data

Continuous measurements of sea surface data (temperature, salinity, attenuance, chlorophyll, pCO_2, etc.), meteorology, navigation and bathymetry were made on 17 of the OMEX cruise legs with a sampling frequency of either 30 seconds or 1 minute. In addition, there is surface temperature, salinity and chlorophyll data from 21 instrumented Continuous Plankton Recorder tows.

The data are presented on the CD-ROM in a fully documented binary format. A *Windows* application, the Underway Explorer, forms the primary interface to the data. The program displays the data as stacked time series plots and a spreadsheet grid, which may be exported as ASCII or copied to other applications over the clipboard.

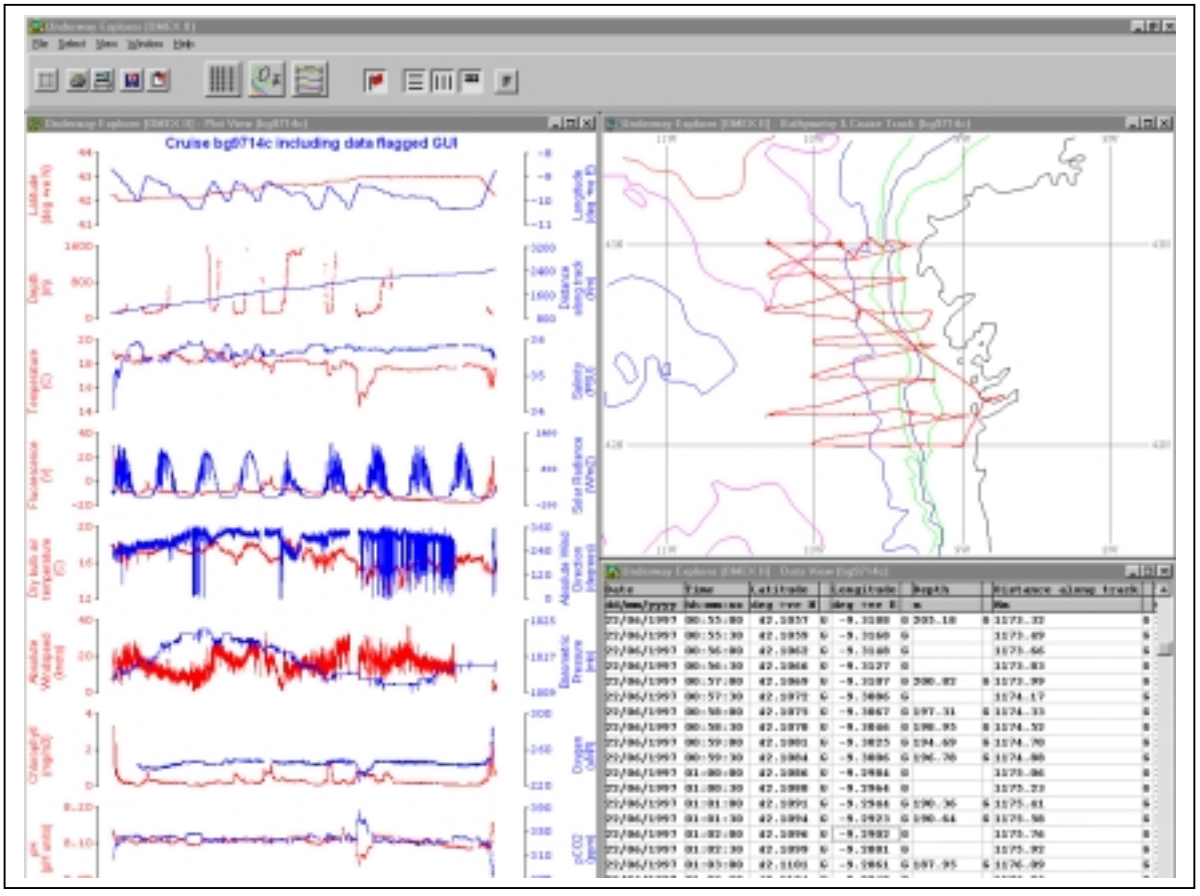
The data are given spatial context by a map of the cruise track overlain on GEBCO-97 bathymetry, which indicates the subset of the data that have been selected.

The *Acrobat* soft manual provides full descriptions of the protocols used to collect the data, a specification of the format used to store the data and instructions for using the Underway Explorer software.

OMEX II Moored Instrument Data

The OMEX II moored instrument data set consists of 43 individual time series from moored current meters, thermistor chains and benthic landers. The data are presented on the CD-ROM as a series of files in either ASCII or, for some data types, NetCDF binary format.

Both formats are handled transparently by the Mooring Explorer interface software. This allows the data to be displayed



graphically or listed in a tabular format that may be exported to other applications via the Clipboard.

The moored instrument data set is indexed through either spreadsheets, present in both ASCII and Excel formats, or through a form included in the OMEX II *Access* database.

In addition to the conventional time series data, high-frequency 3-dimensional current fields recorded by the STABLE lander operating in burst mode are included in the data set. These are supplied in compressed ASCII format.

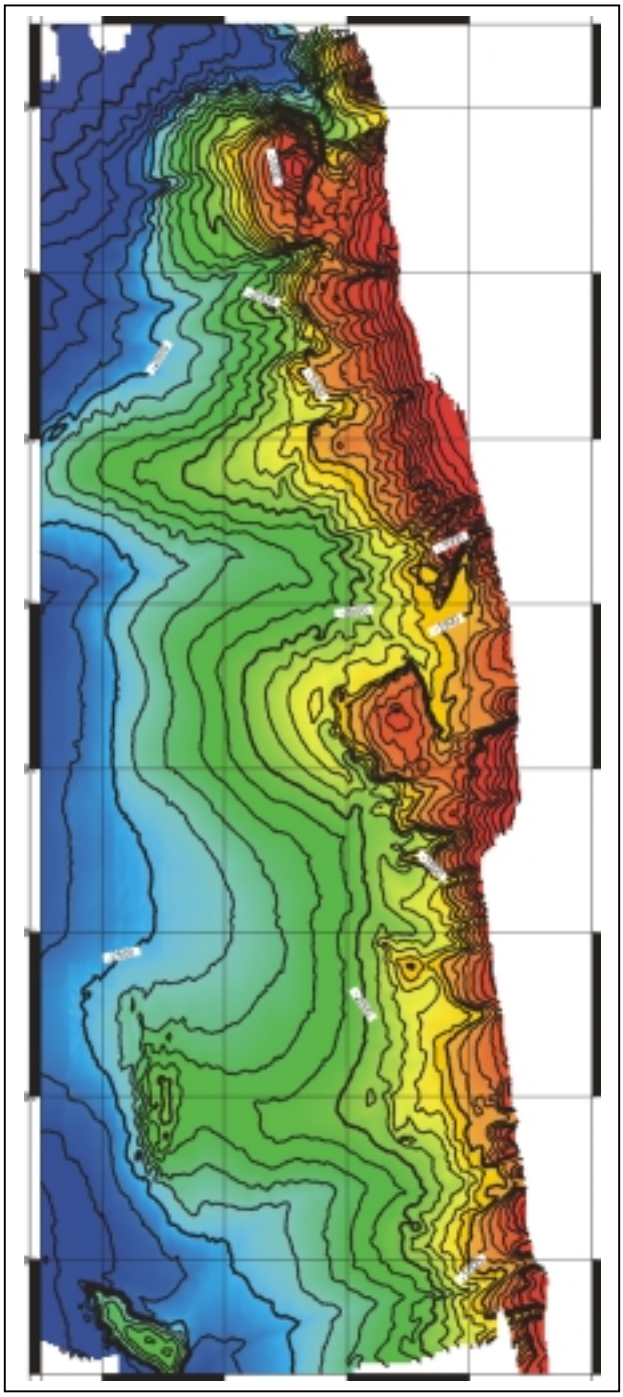
The Users' Guide provides complete documentation on data collection and processing protocols plus descriptions of the storage formats used.

The STABLE II lander contributed to the moored instrument data set

OMEX II Bathymetry

The OMEX II fieldwork began with a swath bathymetry survey of the Iberian Margin undertaken by RRS Charles Darwin. The data from this survey are presented as a gridded data set and as a series of contour vectors.

The contour vector data set also includes a shelf boundary in the form of a 200m contour derived from conventional echo sounder data collected during OMEX II.

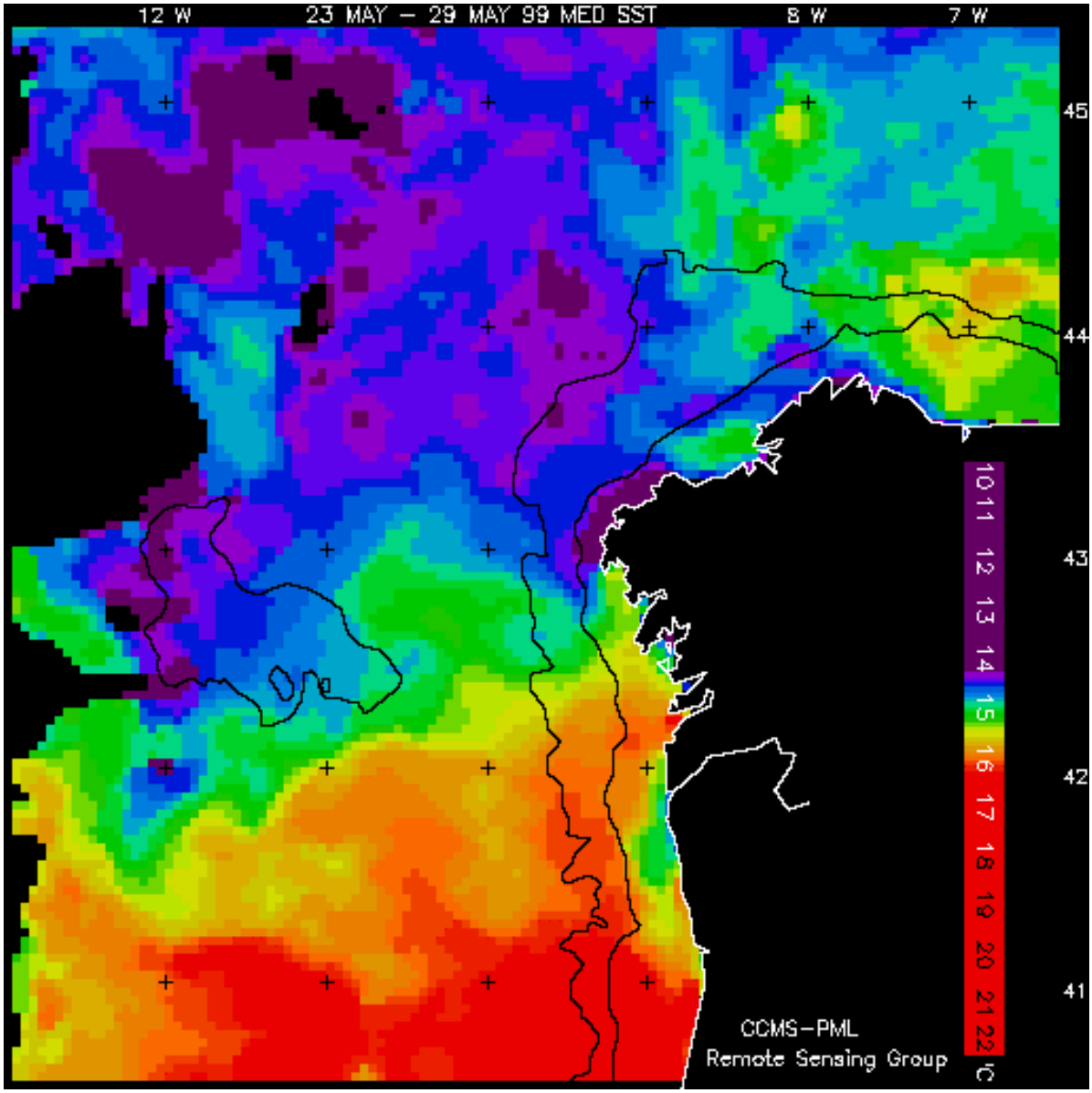


OMEX II Swath Bathymetry (42-43N)

OMEX II Images

A selection of image data is presented on the CD-ROM. These include satellite images, Kasten core X-ray photographs, and seafloor photographs, including a 12-month time lapse series collected by the NIOZ BOBO lander. The images may either be accessed through the *Acrobat* soft manual or, in some cases, through a Web browser window that is launched by *Acrobat*.

EXIT



Weekly Composite Sea Surface Temperature Image

OMEX II UOR Data

Data from seven UOR tows collected during the 1999 Thalassa cruise are included on the CD-ROM as ASCII time series.

NOAA Upwelling Indices

A time series of upwelling indices for the Iberian Margin (42°N, 9°W) from January 1993 until November 1999 were kindly supplied by the US National Oceanographic and Atmospheric Administration for the OMEX project and these have been included on the CD-ROM to assist future interpretation of the data.

Acknowledgements

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